

10/70
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THE DEPENDENCE OF UV EXTINCTION PROPERTIES ON DUST ENVIRONMENT

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UV extinction data, derived from the Savage et al. (1985) ANS extinction catalog, are analyzed. The data include the normalized extinction at 1550\AA , the strength of the 2175\AA bump, and a crude estimate of the bump width. The results confirm the systematic increase of far-UV extinction with galactic altitude first uncovered by Kiszkurno-Koziej and Lequeux (1987) and verify that this effect is in fact a result of the dust being away from the plane, and not a generalized density dependence. It is also shown that the width of the 2175\AA bump is systematically broader in denser regions (defined by large values of $E(B-V)$ per Kpc), implying that a similar galactic altitude effect seen in this parameter may only be a reflection of the lower densities encountered away from the plane.

The dependence of bump width upon bump strength is also examined. It is shown that a relationship between these two parameters is expected for certain models of the bump, but none is found. However, two factors which could be complicating a straightforward interpretation of the observations are identified and discussed.

REFERENCES

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